

## ABSTRACT OF THE DISCLOSURE

The light collimating plate includes a lens substrate, a plurality of microlenses disposed on a surface of the lens substrate, a plurality of light entrance areas, each having a circular or rectangular form a center of which is on an optical axis of the microlens, and a light shield layer formed on another surface of the lens substrate, and covering other area than the light entrance areas. When  $n$  and  $t$  are a refractive index and a thickness of the lens substrate, respectively, and  $C$  ( $R$ ; diameter,  $A$ ,  $B$ ; sides of rectangle) is a size of light entrance area, a size of the microlens  $S_r$  satisfies the following formula in the light collimating plate:  $S_r \geq 2t \times \tan\theta + C$  (with the proviso that  $\theta = \sin^{-1}(1/n)$ ). Or, a form of the microlens in the light collimating plate is a part of an ellipsoid shown in the following formula  $X^2/a^2 + y^2/a^2 + z^2/c^2 = 1$  ( $x$  and  $y$  represent axis on the surface of the lens substrate,  $z$  represents the optical axis), it's accentricity  $\epsilon$  is shown in the following formula  $\epsilon = (c^2 - a^2)^{1/2}/c = 1/n$  and it's far focal point is on a position of the light entrance area. The lighting apparatus and the liquid crystal display apparatus use the light collimating plate.